



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,539	07/06/2001	David S. Ebbo	03797.00127	3399
27488	7590	05/23/2006	EXAMINER	
MERCHANT & GOULD (MICROSOFT)				AILES, BENJAMIN A
P.O. BOX 2903				
MINNEAPOLIS, MN 55402-0903				
		ART UNIT		PAPER NUMBER
		2142		

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/899,539	EBBO ET AL.
	Examiner	Art Unit
	Benjamin A. Ailes	2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 28 February 2006.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-26 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-26 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is in response to correspondence filed 28 February 2006.
2. Claims 1-26 remain pending.

#### ***Response to Amendment***

3. Examiner acknowledges the amendment to the specification. Prior specification objection has been withdrawn.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-9 and 14-22 are rejected under 35 U.S.C. 102(a) as being anticipated by Schloss et al. (U.S. 6,249,844 B1), hereinafter referred to as Schloss.

6. Regarding claim 1, Schloss discloses a method for providing a response to a request for information from a client computing system having an output cache for storing portions of web pages corresponding to at least partial responses to previous requests for information, the method comprising:

receiving, at the server computing system, a request for information from the client computing system (Fig. 6 and col. 6, ll. 16-17, Schloss discloses a server entity waiting to receive input from a client; col. 6, ll. 22-25, Schloss discloses for example a request in a web environment containing object requests being within an URL.);

creating a page object having references to objects on the server computing system in response to the received request for information (col. 6, ll. 22-25, Schloss discloses for example a request in a web environment containing object requests being within an URL), when the output cache contains a pre-rendered output data of an object referenced by the page object (col. 6, ll. 31-34, Schloss discloses the object request handler checks whether the requested object is in the object cache.), the pre-rendered output data of the object referenced by the page object contained in the output cache is retrieved from the output cache (col. 6, ll. 34-35, Schloss discloses if the object is cached, then the cached object is returned.) and when the output cache does not contain a pre-rendered output data of an object referenced by the page object, executable code for the object referenced by the page object not contained in the output cache is retrieved from another source and instantiated to create the object referenced by the page object (col. 6, ll. 35-37, Schloss discloses if the object is not in the cache a request is sent to a content server or other proxy server to retrieve the object.);

inserting the retrieved pre-rendered output data and objects as components into a hierarchical tree data model such that each component is linked to at least a prior component (Figure 4, col. 5, ll. 53-55, Schloss discloses the web document being modified after fragments (objects) have been recognized and retrieved, and col. 6, ll. 41-43, Schloss discloses the object description after being modified is sent back to the client (requestor). Schloss discloses the use of digital objects used in web environments and written in XML, SGML, and HTML. XML, SGML, and HTML are all deemed to be

Art Unit: 2142

web files which use hierarchical tree data models to organize themselves and be readable by web browsing applications.);

rendering the components of hierarchical tree data model to create a rendered page (Figure 4, col. 5, ll. 53-55, Schloss discloses the web document being modified after fragments (objects) have been recognized and retrieved, and col. 6, ll. 41-43, Schloss discloses the object description after being modified is sent back to the client (requestor). Schloss discloses the use XML); and

sending contents of the created rendered page to the client computing system (col. 3, ll. 25-27, Schloss discloses the client receiving the modified web document after the server is done processing.).

7. Claim 14 contains similar subject matter and is rejected under the same rationale as claim 1.

8. Regarding claim 2, Schloss discloses the method wherein:

the created page object includes a reference to a user control object, the user control object including instructions for obtaining data and an output caching directive for caching output data generated by rendering the user control object for the created page (col. 4, lines 24-37, Schloss discloses the use of XML code, the object request handler parses the code and determines the cacheability; ll. 50-54, Schloss discusses again the steps taken to determine cacheability of fragments/objects.),

the step of rendering further comprises:

executing instructions of the user control object to obtain the data and the output data (col. 6, lines 32-35, Schloss discloses the use of the object request handler to

parse the code and obtain the data needed, whether it be from the cache or from another location (i.e. a content server).); and

storing the output data in the output cache (col. 6, ll. 43-48, Schloss discloses the use of an object cache manager to determine the cacheability of an object/fragment and if the object/fragment is cacheable, then the object/fragment is cached into the output cache.).

9. Claim 15 contains similar subject matter and is rejected under the same rationale as claim 2.

10. Regarding claim 3, Schloss discloses the method wherein the contents of the created rendered page comprises an HTML specification for a web page (col. 2, lines 40-42, Schloss discloses the use of HTML.).

11. Claim 16 contains similar subject matter and is rejected under the same rationale as claim 3.

12. Regarding claim 4, Schloss discloses the method wherein:  
the created rendered page includes at least one control (col. 4, lines 24-37, Schloss discloses the use of XML code, the object request handler parses the code and determines the cacheability; ll. 50-54, Schloss discusses again the steps taken to determine cacheability of fragments/objects.);

the step of inserting a component includes inserting a component corresponding to each respective one of the at least one control (col. 4, lines 24-37, Schloss discloses the use of XML code, the object request handler parses the code and determines the

Art Unit: 2142

cacheability; II. 50-54, Schloss discusses again the steps taken to determine cacheability of fragments/objects. The fragments/objects being the controls.); and

the step of rendering the page comprises rendering each one of the components individually (Fig. 11 and col. 8, II. 4-10, Schloss discloses the handler generating (rendering) the objects/fragments as needed.).

13. Claim 17 contains similar subject matter and is rejected under the same rationale as claim 4.

14. Regarding claim 5, Schloss discloses the method further comprising:

creating the hierarchical tree data model including each of the components and a hierarchical relationship among the components, the data model being used during the step of the rendering the page to render each of the components (Figure 4, col. 5, II. 53-55, Schloss discloses the web document being modified after fragments (objects) have been recognized and retrieved, and col. 6, II. 41-43, Schloss discloses the object description after being modified is sent back to the client (requestor). Schloss discloses the use XML).

15. Claim 18 contains similar subject matter and is rejected under the same rationale as claim 5.

16. Regarding claim 6, Schloss discloses the method wherein the output caching directive includes a time duration during which the output data is permitted to reside in the output cache (col. 8, line 60 – col. 9, line 6, Schloss discloses a caching method wherein when an update becomes available for an item in the cache, the item is updated accordingly.).

17. Claim 19 contains similar subject matter and is rejected under the same rationale as claim 6.

18. Regarding claim 7, Schloss discloses the method wherein the output caching directive includes an attribute indicating a condition for varying the output data to be stored in the output cache (col. 6, lines 43-48, Schloss discloses storing items in the cache based on criteria, i.e. static vs. dynamic, size, update frequency, or time since last reference).

19. Claim 20 contains similar subject matter and is rejected under the same rationale as claim 7.

20. Regarding claim 8, Schloss discloses the method wherein the attribute indicates that the output data is to be stored in the output cache according to a type of browser used by the client computing system (col. 3, lines 26-31, Schloss discloses the method of controlling what is cached based on the user's computing system functionality being used (i.e. a handheld device, a set top box, or an Internet appliance).).

21. Claim 21 contains similar subject matter and is rejected under the same rationale as claim 8.

22. Regarding claim 9, Schloss discloses the method wherein the attribute indicates that the output data is to be stored in the output cache according to values of at least one parameter (col. 6, lines 43-48, Schloss discloses storing items in the cache based on criteria, i.e. static vs. dynamic, size, update frequency, or time since last reference).

23. Claim 22 contains similar subject matter and is rejected under the same rationale as claim 9.

***Claim Rejections - 35 USC § 103***

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

25. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

26. Claims 10, 11, 13, 23, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schloss in view of Mattson (U.S. Patent Number 5,434,992), hereinafter referred to as Mattson.

27. Regarding claim 10, Schloss discloses the need to increase data output performance, but is silent on the use of performance counters to monitor output-caching performance. However, Mattson discloses the use of counters to measure the performance of a cache (col. 9, line 56 – col. 10, line 2). One of ordinary skill in the art at the time of the applicant's invention would have recognized the advantage of using performance counters in order to improve the output of data (Schloss, col. 2, lines 27-

Art Unit: 2142

30). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to combine the performance counters disclosed by Mattson with the data output method using data caching disclosed by Schloss.

28. Claim 23 contains similar subject matter and is rejected under the same rationale as claim 10.

29. Regarding claims 11 and 24, Schloss discloses the need to increase data output performance, but is silent on the use of hit and miss counters to monitor output-caching performance. However, Mattson discloses the uses of hit and miss counters to measure the performance of a cache (col. 9, lines 56-64). The same motivation that was utilized in the combination of claims 10 and 23 applies equally as well to claims 11 and 24.

30. Regarding claims 13 and 26, Schloss discloses the need to increase data output performance, but is silent on the use of calculating an output cache hit ratio to monitor output-caching performance. However, Mattson discloses the use of calculating hit ratios in order to measure the performance of a cache (col. 9, lines 56-64). The same motivation that was utilized in the combination of claims 10 and 23 applies equally as well to claims 13 and 26.

31. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schloss in view of Smith et al (U.S. Patent Number 5,802,600), hereinafter referred to as Smith et al.

32. Regarding claims 12 and 25, in accordance with claims 10 and 23, respectively, Schloss discloses the need to increase data output performance, but is silent on

counting the number of additions and removals to the output cache. However, Smith et al. disclose gathering statistics based on directory entries to measure output-caching performance (col. 5, lines 8-54). One of ordinary skill in the art at the time of the applicant's invention would have recognized the advantage of using performance counters in order to improve the output of data (Schloss, col. 2, lines 27-30). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to combine the statistics gathering method disclosed by Smith et al. with the data output method using data caching disclosed by Schloss.

### ***Response to Arguments***

33. Applicant's arguments filed 28 February 2006 have been fully considered but they are not persuasive.

34. (A) Regarding independent claim 1, Applicant argues that Schloss never performs the noted steps claimed in claim 1, the noted steps being (1)"creating a page object having references to objects on the server computer system", (2)"retrieving the pre-rendered output data", (3)"inserting the retrieved pre-rendered output data", (4)"rendering the components", and (5)"sending contents of the created rendered page".

35. In response to (A), the Examiner respectfully disagrees. (1) Taking the broadest reasonable interpretation, a "page object" is understood best as a file written in browser readable code like HTML or XML. Schloss clearly discloses the use of digital objects in column 2, lines 40-42. These digital objects being written in well-known in the art web page languages XML, SGML, or HTML. Schloss utilizes the digital object files to contain and identify the object fragments needed which is deemed functionally

Art Unit: 2142

equivalent to claimed "page object having references to objects". (2) Taking the broadest reasonable interpretation, "retrieving the pre-rendered output data" is understood as receiving data from a location that had been loaded previously on the user's system, in this example the best scenario is to retrieve an object of any kind from a cache that had been previously rendered on the user's system. Schloss clearly discloses the inserting and retrieving of digital object fragments from a cache located at either the client system or a server system. Schloss' ability to cache just object fragments and not have to cache whole web pages is deemed functionally equivalent and satisfies the claim limitation of "retrieving the pre-rendered output data". (3) Taking broadest reasonable interpretation of "inserting the retrieved pre-rendered output data", it is best understood as loading the data retrieved from a location (i.e. a cache) and placing the data into the page object. As mentioned above in (1), Schloss clearly discloses the use of digital objects in column 2, lines 40-42. These digital objects being written in well-known in the art web page languages XML, SGML, or HTML. Based on where the object fragment is located, the digital object file is revised accordingly (see Schloss, col. 2, lines 49-53) and therefore is deemed functionally equivalent to the "inserting" method as claimed. (4) Taking the broadest reasonable interpretation of "rendering the components", the rendering of the components is deemed the same as loading components to be viewable by a user in a web browser. Schloss discloses the "rendering" step in figure 4 and by use of a CPU which inherently includes some sort of display device (i.e. a monitor) and therefore is deemed functionally equivalent to the claimed "rendering" step as claimed by applicant. (5) Taking the broadest reasonable

interpretation of "sending contents of the created rendered page", the created rendered page being written in a browser readable format like HTML, Schloss discloses the client system loading the page after being retrieved in column 6, lines 41-43 and therefore is deemed functionally equivalent to the "sending" limitation as claimed.

36. (B) Applicant argues further that Schloss does not use a hierarchical tree data model. the Examiner respectfully disagrees. The broadest reasonable interpretation of the use of a hierarchical tree data model to organize portions of a web page is best understood as the utilization of a language readable by a browser in order to load component effectively. Schloss clearly discloses the use of organizing object fragments utilizing exemplary web language coding schemes like HTML, XML, or SGML which are known to utilizing nesting in order to accurately portray hierarchy schemes. Examples of this are demonstrated by Schloss by way of figures 3 and 4 and discussed at length using XML as an exemplary embodiment in column 4, lines 21-49. The scheme used by XML is deemed functionally equivalent to the claimed methods of using a hierarchical tree data model.

37. In view of points (A) and (B), the claims as written are not deemed patentable over the prior art of record. Simply, for the reason that Schloss discloses systems and methods which are directly utilized for the caching of web page object fragments, the determination of fragments' cacheability at a client or a server location in a memory cache, and their retrievability from a memory cache and the loading ability upon display to a web browser user at a client machine.

***Conclusion***

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Craig et al. (US 6,757,708 B1) discloses caching dynamically generated content as well as determining when the cached content should be invalidated or purged.

39. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is (571)272-3899. The examiner can normally be reached on M-F 6:30-4, IFP Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2142

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

baa

*Beatriz Prieto*  
BEATRIZ PRIETO  
PRIMARY EXAMINER